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15 July 1982

Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 152

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FUEL FROM SOVIET-BUILT FINNISH NUCLEAR PLANT SENT TO SWEDEN

Helsinki HELSINGIN SANOMAT in Finnish 5 Jun 82 p 10

[Article: "Fuel From Loviisa Nuclear Power Plant to Sweden"]

[Text] Loviisa--At this time a most unusual load of cargo in a long time is sailing from Finland to Sweden. A bundle of nuclear fuel that has been in the Loviisa 1 reactor for 3 years left the Port of Loviisa on Friday evening in the ro-ro ship Bore Song.

The bundle was removed from the reactor in 1980 and now it is being sent for study at the Studsvik Research Institute in Central Sweden.

The bundle weighs only 120 kilos, but due to the forceful radiation of the fuel, it is packaged in a transport container weighing approximately 30 tons. Therefore, a traction vehicle leased from Sweden for ground transportation and a ship intended for specialized transport are needed.

One of the reactor's 349 fuel bundles is being sent to Sweden because the Finns need additional information on nuclear fuel.

An agreement was reached with respect to a study on the fuel bundle between the Ministry of Trade and Industry and the State committee supervising the use of Soviet nuclear fuel. Imatra Power has also concluded a cooperative agreement with the Swedish Studsvik Energiteknik Corporation.

Studies Will Take 6 Months

"The fuel in Sweden will last 6 months," states Licentiate in Engineering Antero Tamminen of Imatra Power.

"The fuel bundle will be disassembled into parts. It consists of 126 fuel rods, whose surface will be studied with exceptional precise measurements. Samples will also be scraped from the surface for laboratory studies."

After the studies are completed the bundle will be returned to Loviisa from where it will in time be transferred to the Soviet Union just as all the other spent fuel.

Officials of the Radiation Safety Institute in Finland have kept an exceptionally close surveillance on the fuel in the Loviisa Nuclear Power Plant during the operations of the plant since Finnish officials did not have an opportunity to familiarize themselves with the manufacture of the fuel at the Soviet plant.

Only One Leak in Protective Skin of the Rods

The Radiation Safety Institute has also determined an 8-percent power limitation during the initial stage of the operations of the plant at Loviisa.

However, the fuel at Loviisa has so far turned out to be secure. For example, there has been only one leak in the protective skin of the fuel rods. Internationally, this is considered to be an exceptionally good situation.

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CSO: 5100/2185

STUDY ADDRESSES URANIUM MINING DEVELOPMENT ISSUES

Canberra THE AUSTRALIAN in English 27 May 82 p 14

[Article by Nicholas Rothwell]

[Text] THERE is "no long-term possibility" that resource development in the uranium-rich Alligator Rivers province of the Northern Territory can be avoided, one of Australia's top mining company executives has predicted.

Mr John Elliston, a senior geologist for Peko-Wallsend, has prepared a detailed study of Australia's resources, which makes the controversial claim that the Northern Territory's Alligator Rivers uranium deposits, many of which are now in a region zoned as National Park or Aboriginal Land, will be needed for use in the world's nuclear power reactors.

Mr Elliston also warned that industrial development in Australia lay in "a miserable shambles" at the feet of government over-spending and union greed.

"Significant socio-economic factors" were impeding development and stultifying the national livelihood.

"We have lost sight of the goal of national development in keeping with national growth, we have tried to reap the benefits of our natural resources and industry before the work, effort and cost of developing them have been applied to the task," he said.

Movement forward for Australia was impeded by ridiculous policy, legal complexities and over-regulation, excessive tax burdens and imposts, exaggerated environmental claims and rising costs.

The technical task of finding an ore-body to develop had become "almost trivial" compared with the other task facing resource development companies — the task of overcoming the impediments to development.

Many more mineral and petroleum reserves remained for discovery in Australia because they lay concealed beneath the surface, and the harsh inland climates of the continent had resulted in incomplete settlement and exploration.

Australian industry had the technological skills to find and develop the natural resources of the country, which were essential to a resource-hungry, over-populated world.

Already 40 per cent of the nation's export earnings were provided by the mining industry, which was worth more than $7100 million a year.

Mr Elliston stressed prospects for discovery of oil and gas in Australia were good, but that this country would remain "at the mercy of OPEC" until it developed other sources of energy.

He detailed major resource deposits already found but not yet in development:

- McARTHUR River lead-zinc deposit in the Northern Territory — probably the largest such resource in the world, but still delayed because of problems with the economics of the mine;
- JABILUKA uranium ore-body in the Northern Territory, certainly the largest in the world but held up for 10 years "by government intervention" and not yet in production;
- SIGNIFICANT other uranium resources at Roxby Downs, Ranger 68 and Beverley are also held up, mainly pending clarification of policy issues.

He also warned that the "ravenously money-hungry Government" had reduced the oil exploration industry to the worst state in its history, with steep rises in tax levels on oil and gas, while hardly any exploration had been mounted in highly prospective areas such as the Cooper Basin.

But the worst example of bad planning for Australia's future was the uranium industry, where "post-industrial era philosophy" had worked on popular ignorance to cloud the question of nuclear power

"The Alligator Rivers province contains possibly the largest low-cost energy source in the world and in our rapidly overpopulating globe, millions of people are going to be dependent on it," Mr Elliston warned.

"An energy resource of the same order as the presently known oil reserves of Saudi Arabia will not be left inviolate in the ground while the price of industrial power elsewhere in the world climbs beyond the reach of billions of people who live in cities which depend on low-cost power."

Australia could not choose to withhold its uranium from the world without a mounting risk that other more energy-dependent nations would seek to develop the fuel for Australia by one means or another.

CSO: 5100/7536

PROTESTERS OCCUPY HONEYMOON, OTHER URANIUM MINES

Antimining Campaign

Canberra THE AUSTRALIAN in English 17 May 82 p 3

Article by Nicholas Rothwell]

[Text] THE anti-nuclear movement yesterday began a nationwide campaign to block new uranium mining ventures, with hundreds of demonstrators converging on mine sites in South Australia and Queensland.

More than 370 demonstrators are camped on the edge of the Honeymoon mine in the far north-east of South Australia.

At the Ben Lomond mine near Townsville, a demonstration is being mounted by a smaller group, the World Bike Ride for a Nuclear-Free Future — a protest group that plans to cycle round the world calling for a halt to uranium mining, and a ban on nuclear weapons and power stations.

The demonstrations come as the local uranium industry is weathering a crisis of confidence following Exxon's decision last week to pull out of the development of Western Australia's rich Yeelirrie uranium mine.

Last week, at an inspection of the Honeymoon project, the deputy general manager of CSR, Mr Bryan Kelman, warned that mining would not go ahead without public support for the project. CSR is the main partner in the project.

Police were keeping a close watch yesterday on the demonstators at Honeymoon and Ben Lomond, which is operated by the French-controlled Minatome company.

The protesters at Honeymoon plan to take over the mine site, which is little more than a clutch of huts surrounded by expanses of talc-fine red dust and scattered saltbush.

But lawyers representing the co-ordinating protest group, the Coalition for a Nuclear-Free Australia, fear that the Honeymoon protest, which is being mounted on a principle of "non-violent occupation," may be cut short by the police

A spokesman for the South Australian Police said last night the demonstrators were welcome to stay around the site provided no damage was done to the property of the developing company.

"If we ever want to get rid of them, all we have to do is go up wind of where they are and drive a truck up and down, and they will be covered in the dust clouds, if they haven't already been eaten by the ants," the spokesman said.

At Ben Lomond, Townsville police are keeping an eye on the mine site. One policeman said he believed the protesters would be so tired by their bike ride from the coastal plain they would be in no fit state to do any damage.

Clashes with Police

Brisbane THE COURIER-MAIL in English 18 May 82 p 10

[Text] **BROKEN HILL. — About 400 protesters yesterday ended their three-day occupation of South Australia's Honeymoon uranium mine despite violent scenes on the last morning.**

After being refused a meeting with the management three times, about 30 protesters began tearing down a 75 m section of high-security fence surrounding a "no-go" zone.

They had declared the site to be the property of the Aboriginal people and demanded that poilce and mining officials leave.

Police with dogs were unable to stop the protesters from spilling into the out of bounds area, where they staged a 90 min sit-in.

At one stage, some of the 30 police at the fence struggled with demonstrators but the occupants refused to move.

Some demonstrators received minor cuts and bruises in the clashes but there were no serious injuries.

In a statement to be sent to the Prime Minister, Mr Fraser, and the South Australian Premier, Mr Tonkin, the group protested at the "excessive deployment of police to protect the mining companies' interests by officers, horses, dogs, patrol cars and a spotlight tower on the scale of a military operation."

The statement said: "We declare that this Honeymoon protest is only the start."

CSO: 5100/7535

NUCLEAR CIVIL DEFENSE SAID TO BE NEGLECTED BY GOVERNMENT

Canberra THE AUSTRALIAN in English 19 May 82 p 9

[Article by Fia Cumming]

[Text] AUSTRALIANS would be better protected by a $5 million civil defence program than by an aircraft carrier and jets costing $1000 million, according to many of the nation's foremost independent experts on security.

And, according to civil and defence analysts and leaders who recently met at the Australian National University in Canberra for a conference on Civil Defence and Australia's Security, governments are doing little to make sure that people living in Australia are protected against nuclear or conventional attack.

Civil defence in Australia is left to the under-budgeted National Disasters Organisation and State governments' emergency services. While nuclear scares have companies specialising in building nuclear fallout shelters reportedly doing record business a private shelter, which can cost up to $17,000, is out of the question for the general public.

The chairman of the strategic studies unit at the West Australian Institute of Technology, Dr Geoffrey Williams, said at the conference he believed increasing tensions between East and West had raised questions about the readiness of Australia to look after its civilian population in the event of a nuclear or non-nuclear attack.

"It is time that the federal Government came up with a comprehensive policy guide on how it might be possible to survive a wide variety of attacks on the civil population," Dr Williams said. "There is a head-in-the-sand attitude towards the whole question of civil defence which is truly disturbing.

"Well, it is time to contemplate the unthinkable — even though I do not regard a Soviet nuclear first-strike on Australia as a particularly likely contingency."

Another claim made at the conference was that a nuclear attack would not necessarily be the end of the world, or even the end of the world as we know it. With adequate protection only 2 to 3 per cent of the population would be casualties, even in an all-out nuclear exchange, it was claimed.

But relative to other countries, Australia is certainly not well prepared.

Professor Richard Aynsley of the University of Technology in Papua New Guinea compared some countries' programs:

UNITED STATES: Between 1970 and 1979 it spent about $900 million on civil defence, most fallout shelters in ordinary buildings above ground level.

RUSSIA: Between 1970 and 1979 it spent about $380,000 million. Much shelter space underground.

SWITZERLAND: Has had a fallout shelter building program for the past 20 years and can shelter 70 per cent of the population.

AUSTRIA and GERMANY: Similar programs to the Swiss, but less advanced.

FINLAND, NORWAY and SWEDEN: All have large underground public shelters and hospitals and aim to provide shelter space for the entire populations.

ISRAEL: A widespread shelter network which was used effectively during the Six-Day War.

CHINA: Shelter space for most of the population in simple underground spaces.

In comparison, the conference concluded, Australia's civil defence programs were under-funded and under-planned. In the words of the director-general of the NDO, Major General K.W. Latchford, the NDO's "one distinct civil defence capability" is its fallout shelter-space survey.

The survey was set up in 1966 to examine large buildings in all capital cities as potential fallout shelters in the event of a nuclear attack.

Originally there were survey offices in all States and a team of 14 surveyors. There is now one office, in Sydney, and a staff of two. The most senior surveyor recently left and has not been replaced.

The results of the survey are no more comforting. So far the survey has examined the following numbers of buildings as possible shelters (some of these may have been found unsuitable):

ADELAIDE: City 270, suburbs 0

HOBART: City 0, suburbs 0
PERTH: City 160, suburbs 100
BRISBANE: City 100, suburbs 350
MELBOURNE: City about 200, suburbs 75
SYDNEY: City about 200, suburbs 120.

The people responsible for our civil defence are also concerned.

The scientific advisor to the NSW and Tasmanian Emergency Services, Dr D.W. Posener, said even one medium-yield nuclear warhead exploding on Australian soil would cause chaos in present circumstances, no matter where it landed.

Both immediate and delayed effects must be considered, and a civil defence program tailored to Australia's unique geographic situation.

"The current 'public safety' provisions are minimal," Dr Posener said. "Contingency planning could make a very significant improvement at very low cost — given sufficient (say two years) lead time."

Even the Defence Department, while accepting the emphasis on civil defence against natural disasters, criticised present civil defence arrangements and found "it would be wrong to conclude that all is necessarily well".

Areas for concern were:

● Variation between States would hamper efforts in any national disaster.

● Potential disaster problems were being underestimated, especially in relation to cities.

● Emergency services were clustered where they would inevitably be damaged in any urban disaster.

● Voluntary and professional services were being distracted by "boundary disputes" in their work.

● There was evidence that some plans existed only on paper because of dire shortages of manpower, systems and resources to carry them out.

The greatest irony to emerge from the conference was that a civil-defence program, which would prepare the nation for an emergency and have a huge life-saving potential, would cost (according to three different speakers) only $5 million a year over two or three years.

That is roughly the same as the NDO's present budget, and 0.13 per cent of the original defence budget for 1981-82.

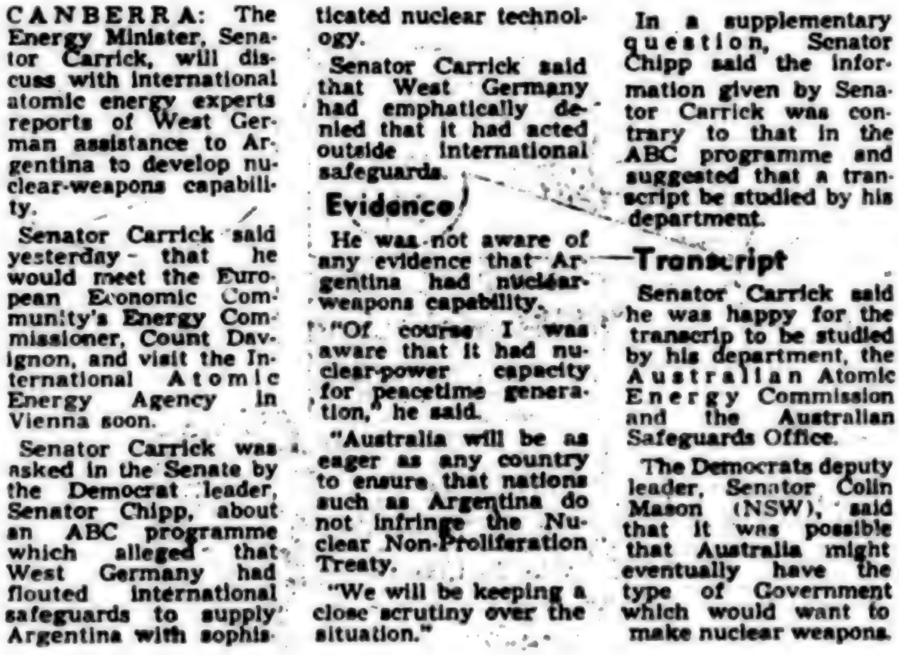
In other terms, it is one 200th the cost of the Invincible and the Harrier jump-jets needed to make it effective.

CSO: 5100/7535

SENATOR TO CHECK RUMORED BONN NUCLEAR AID TO ARGENTINA

Perth THE WEST AUSTRALIAN in English 19 May 82 p 50

[Text]



CANBERRA: The Energy Minister, Senator Carrick, will discuss with international atomic energy experts reports of West German assistance to Argentina to develop nuclear-weapons capability.

Senator Carrick said yesterday that he would meet the European Economic Community's Energy Commissioner, Count Davignon, and visit the International Atomic Energy Agency in Vienna soon.

Senator Carrick was asked in the Senate by the Democrat leader, Senator Chipp, about an ABC programme which alleged that West Germany had flouted international safeguards to supply Argentina with sophisticated nuclear technology.

Senator Carrick said that West Germany had emphatically denied that it had acted outside international safeguards.

Evidence

He was not aware of any evidence that Argentina had nuclear-weapons capability.

"Of course I was aware that it had nuclear-power capacity for peacetime generation," he said.

"Australia will be as eager as any country to ensure that nations such as Argentina do not infringe the Nuclear Non-Proliferation Treaty.

"We will be keeping a close scrutiny over the situation."

In a supplementary question, Senator Chipp said the information given by Senator Carrick was contrary to that in the ABC programme and suggested that a transcript be studied by his department.

Transcript

Senator Carrick said he was happy for the transcrip to be studied by his department, the Australian Atomic Energy Commission and the Australian Safeguards Office.

The Democrats deputy leader, Senator Colin Mason (NSW), said that it was possible that Australia might eventually have the type of Government which would want to make nuclear weapons.

CSO: 5100/7535

JABILUKA URANIUM PROJECT PAYMENTS TO ABORIGINALS NOTED

Canberra THE AUSTRALIAN in English 21 May 82 p 15

[Article by Bruce Jacques]

[Text] PARTNERS in the Jabiluka uranium project will pay as much as $10 million to the Northern Territory's Aborigines before any yellowcake is produced in probably the most comprehensive and generous royalty agreement in Australia's history.

A copy of the draft agreement between the partners and the Northern Land Council shows the project's payments to Aborigines would be much bigger than those of the nearby Ranger and Nabarlek uranium mines.

The draft agreement has been circulating among the Territory's Aborigines since March when it was initialled by the NLC.

It is still confidential and yet to be fully approved by the NLC which is seeking comment from traditional land owners in the Jabiluka area.

The agreement will also need approval from the Federal Minister for Aboriginal Affairs, Mr Wilson.

Under the main points of the "up-front" section of the draft agreement, the Jabiluka partners will pay the NLC:

- $1 MILLION after ministerial approval of the project and a further $800,000 over the next four years.
- $1.2 MILLION for each of the five years after agreement is reached for the sale of at least 3000 tonnes of yellowcake.
- $1.2 MILLION a year for three years starting 12 months after approval of the mining agreement.
- $3.4 MILLION when production starts.

The NLC will get 4.5 per cent of Jabiluka's revenue plus $500,000 a year for the first 10 years, rising to 5 per cent from the 10-year mark.

The NLC will also get a minimum of $750,000 a year if the operation is suspended.

The agreement provides for monthly environmental reports and obliges the partners to eventually rehabilitate the land to its original state.

Finalising of the royalties is one of only two hitches holding up the Jabiluka partners from starting development following Federal Government approval for the project in March.

The significance of the government approval was that it allowed the Jabiluka partners, Pancontinental and Getty of the United States, to formally tie up contracts for sale of the uranium and to negotiate for loans for the $600 million project.

The other issue which must be resolved before Jabiluka can proceed is that of foreign equity. Pancon has a 65 per cent share in the project and Getty, 35 per cent.

Under Foreign Investment Review Board policy, uranium projects must have at least 75 per cent Australian equity, thus Getty will have to sell at least 10 per cent of its stake.

Pancontinental is believed to have right of first refusal over that stake, but chairman, Mr Tony Grey, has not yet indicated whether the company wants the extra stake.

Except for money paid to the Aboriginal Benefit Trust, the NLC is responsible for distributing the funds paid under the draft agreement.

A list of approved projects is laid down as a guideline for the three Aboriginal organisations which will benefit.

These include items — usually considered basic community services — funded by the Government, such as community amenities, utilities like water, sewerage, power and communications.

Aborigines will also benefit from a unique employment scheme agreed by Pancon.

As well as aiming at 250 local employees by the planned end of the project, a wide ranging education program will be established.

Jabiluka will be coming into production at a time of depressed conditions in the world uranium market, but Mr Grey remains confident the project will be able to tie up contracts, although at prices lower than earlier expected.

CSO: 5100/7535

URANIUM PROJECT PROCEEDING USING IN SITU LEACHING METHOD

Brisbane THE COURIER-MAIL in English 25 May 82 p 19

[Article by Noel Bushnell]

[Text] **CSR Ltd will press on with the Honeymoon uranium project undeterred by the band of protesters the construction site attracted last week.**

A pilot plant being built to test the in situ leaching extraction method is half-finished. It is scheduled to get going in October.

CSR has a 25.5 percent interest through subsidiary AAR Ltd, which is managing the project. MIM has 49 percent and TETON, of the United States, 25.5 percent.

Apart from the basic question of whether uranium should be mined and used at all, the objections to Honeymoon have been largely about the environmental impact of the mining method.

CSR has recently published a pamphlet describing in detail the project and the mining method, although, naturally enough, it is nowhere near as detailed as the environmental impact statement approved by the South Australian and Federal Governments.

In situ leaching is new to this country and the lessees of other small, low grade uranium deposits will be looking anxiously to see how it works out — both economically and environmentally.

The method involves pumping acidified water down a network of cased holes. The water dissolves the uranium and is pumped back to the surface where the uranium is extracted. The water is recycled back through the mine.

$$$$

CSR, of course, is adamant the method is safe and points out that mines in the United States using the method are not only close to population centres but are associated with underground drinking water.

Neither condition pertains to Honeymoon, which is in a barely populated area 75 km, as the executive jet flies, north-west of Broken Hill.

Broken Hill gets its water by pipeline from the Darling River, some distance to the east, and CSR says local underground water is too salty for use by man or beast, except in extreme drought. Further, that water has been naturally contaminated with radon gas and radium for as many million years as it has been in contact with the uranium ore.

The uranium is in the bottom one of the three aquifers — or layers of water-carrying sands — and just in case there is some danger the mining water will be circulated in sealed pipes so there is no contact between it and the unmined layers. CSR says leakages are unlikely but nevertheless a monitoring system will make sure they do not occur.

The most alarming question associated with the project is what impact it might have on the Great Artesian Basin, which supplies water to a vast area of Queensland, Northern Territory, South Australia and New South Wales. CSR is definite: none.

The Honeymoon and Great Artesian Basin water systems are unconnected. It is not possible for the Honeymoon project to contaminate the Basin. CSR says the naturally contaminated groundwater at Honeymoon has been flowing — albeit ever so slowly — towards the Basin for millions of years without any evidence of contamination showing up.

$$$$

It seems, therefore, that economics are likely to prove more of a threat to the project than environmental dangers. The world uranium market has come down considerably since the heady days of 1974, when OPEC decided we should all pay more, a lot more, for our oil.

Here the environmental, anti-nuclear lobby has been more successful, aided immensurably by the Three Mile Island scare. Jittery politicians, particularly in the United States, have followed the lead of a jittery electorate in having nuclear power projects put off or cancelled.

The fast-breeder reactor, which recycles nuclear fuel, has also lessened the demand for uranium.

Spot yellowcake (uranium oxide) prices are currently about US$20 a lb — the market is determinedly non-metric — about half that on offer five or six years ago.

However, most yellowcake is sold on long term contracts and those prices have held up much better. The US Department of Energy quotes an average price of US$37.70 a lb at the start of this year and Euratom, the EEC's nuclear co-operative, says the 1981 average was US$33.25, down from US$36 the year before.

A full scale commercial plant at Honeymoon would produce about 450 tonnes (2200 lb) of yellowcake a year for seven to 10 years, therefore creating total revenue — at the highest current price for the maximum mine life — of about US$366 million (A$349 million at current exchange rates).

CSR has not disclosed the estimated cost of building the commercial plant, which is at least two years down the track. But the pilot plant is costing $6 million to build for a leaching solution flow of 6 litres a second, or $1 million a unit of flow rate.

$$$$

A small-scale commercial plant to handle 25 litres a second is planned to be built after the pilot has run for 12 months. The full plant is not scheduled for a further 12 months.

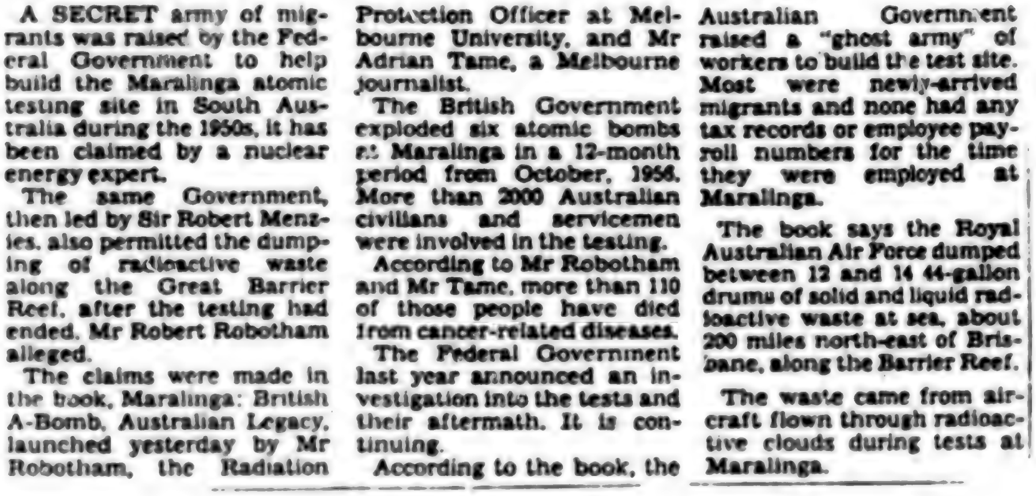
CSR says the advantages of in situ leaching are that it is cheap enough to allow the mining of small, low grade deposits and waste and environmental disturbance are kept to a minimum.

The pilot plant will tell the tale.

CSO: 5100/7535

BOOK CHARGES MIGRANTS USED AT ATOMIC TEST SITE, WASTE DUMPED

Canberra THE AUSTRALIAN in English 26 May 82 p 13



[Text] A SECRET army of migrants was raised by the Federal Government to help build the Maralinga atomic testing site in South Australia during the 1950s, it has been claimed by a nuclear energy expert.

The same Government, then led by Sir Robert Menzies, also permitted the dumping of radioactive waste along the Great Barrier Reef, after the testing had ended, Mr Robert Robotham alleged.

The claims were made in the book, Maralinga: British A-Bomb, Australian Legacy, launched yesterday by Mr Robotham, the Radiation Protection Officer at Melbourne University, and Mr Adrian Tame, a Melbourne journalist.

The British Government exploded six atomic bombs at Maralinga in a 12-month period from October, 1956. More than 2000 Australian civilians and servicemen were involved in the testing.

According to Mr Robotham and Mr Tame, more than 110 of those people have died from cancer-related diseases.

The Federal Government last year announced an investigation into the tests and their aftermath. It is continuing.

According to the book, the Australian Government raised a "ghost army" of workers to build the test site. Most were newly-arrived migrants and none had any tax records or employee payroll numbers for the time they were employed at Maralinga.

The book says the Royal Australian Air Force dumped between 12 and 14 44-gallon drums of solid and liquid radioactive waste at sea, about 200 miles north-east of Brisbane, along the Barrier Reef.

The waste came from aircraft flown through radioactive clouds during tests at Maralinga.

CSO: 5100/7535

BRIEFS

NUCLEAR TARGET CHARGE--Canberra.--An Australian uranium enrichment industry could lead to the manufacture of nuclear weapons and the country becoming a target in a nuclear war, the Senate was warned yesterday. The deputy leader of the Australian Democrats, Senator Mason (NSW), said it was possible Australia might eventually have the type of government which would want to make nuclear weapons. Senator Mason was speaking during an urgency debate on the Government's plans to encourage a nuclear industry, including enrichment of nuclear fuel and nuclear power reactors. He said Australia planned to go ahead with a nuclear industry while other Western countries, including the United States, were realising how costly nuclear power was. He claimed the Government had made no clear statement of its plans because it was aware of the opposition to nuclear power. [Text] [Melbourne THE AGE in English 19 May 82 p 15]

ANTINUCLEAR ACTIVISM--Australia could not afford to have a "head in the sand" attitude about its future if a nuclear conflict occurred, the Australian Labor Party state secretary, Mr Peter Beattie, said yesterday. Mr Beattie returned yesterday after attending an international disarmament conference in Japan. He said that Australia should use its special relationship with the United States to press for nuclear disarmament. "Australia, directly or indirectly, will share the consequences of a nuclear conflict," he said. "Australia most definitely cannot afford to have its head in the sand over its future. "I also spoke out at the conference against activities which could heighten the chances of such a conflict taking place. "In particular, representatives from New Zealand, Belau, Vanuatu and myself jointly expressed our opposition to continuing nuclear testing in the Pacific." Mr Beattie said the only option open to peace movements throughout the world was to keep up their calls for disarmament. [Text] [Brisbane THE COURIER-MAIL in English 20 May 82 p 10]

FREMANTLE RADIOACTIVITY STUDY--The transport of radioactive minerals through Fremantle is to be investigated by the city council. Containers of monazite have been freighted for many years to Fremantle from Capel and Eneabba. They are shipped from the port to several countries, including France, Britain and America. According to council officers it was only recent public awareness that had brought the issue to the forefront. The matter was raised at the council's meeting last Monday by Cr John Troy and has been referred to the council's building and planning committee. The chief health surveyor, Mr Brian Bell, said yesterday that the monazite had been passing through Fremantle for the past 16 years. Council officers are currently preparing a report, with the State Mines Department and radiation experts from the State X-ray laboratory, which will examine the storage, transport and safety of the mineral sands. Fremantle City Council was one of the first municipalities to declare itself nuclear-free and recently erected signs on the city boundaries to emphasise its stance. [Text] [Perty THE WEST AUSTRALIAN in English 21 May 82 p 14]

URANIUM ENVIRONMENTAL RESEARCH LAG--Canberra: Environmental research at the Ranger uranium mine in the Northern Territory is being seriously hampered by a lack of staff and inadequate facilities, according to a report tabled in Parliament yesterday. The Australian Science and Technology Council (ASTEC) said that research into safety standards was progressing too slowly. In its report to the Prime Minister, Mr Fraser, ASTEC said that the main causes for slow research were lack of appropriately qualified staff, inadequate laboratory space and low-standard housing. It was said that research was necessary to develop standards at which the minimum amount of contaminants could be safely released from mines in the Alligator river region. "Even with the present 'no release of contaminated water' policy at Ranger, the effect of possible contaminants must be investigated so that minimum standards can be developed and water management plans formulated," the report said. ASTEC said that preparation must be made for the possibility of some accidental pollution. It said that two recent incidents in the region pointed to the difficulty of maintaining perfect control of human endeavour in an area with such extremes in natural climate. The supervising scientists' research programme was set up on the basis of a recommendation of the Ranger uranium environmental inquiry--a commission which sat between 1975 and 1977. [Text] [Perth THE WEST AUSTRALIAN in English 21 May 82 p 24]

URANIUM EXPLORATION EXPENDITURES--South Australia is experiencing a boom in mineral exploration spending, according to figures revealed yesterday by the State Minister of Mines and Energy, Mr Goldsworthy. Spending on mineral exploration has soared five-fold since 1979, with last year's figure of $51.1 million only $3 million less than total spending last decade (1970-79). "In the future, South Australia's energy needs will be met increasingly by coal fired power generation, so this concentration on coal exploration and evaluation is most important," Mr Goldsworthy said. The search for uranium continued to attract attention in South Australia, accounting for 14 per cent of just over $7 million of reported expenditure. [Excerpts] [Canberra THE AUSTRALIAN in English 26 May 82 p 19]

CSO: 5100/7536

SRV JOINS NUCLEAR NONPROLIFERATION TREATY

OW171919 Hanoi VNA in English 1630 GMT 17 Jun 82

[Text] Hanoi, VNA, June 17 -- Proceeding from its consistent policy of peace and in conformity with United Nations statements and resolutions on curbing the nuclear arms race, the Socialist Republic of Vietnam has decided to subscribe to the treaty of non-proliferation of nuclear weapons, declared Deputy Foreign Minister Vo Dong Giang at the second special session of the U.N. General Assembly on disarmament on June 6. Vo Dong Giang pointed out that the U.S. imperialists were exacerbating international tension, undermining East-West detente, stepping up the arms race, and opposing disarmament, national independence and sovereignty, and world peace and security.

"The well-known peace programme adopted by the Communist Party of the Soviet Union at its 26th Congress and the Soviet Union's recent proposals eloquently prove that the Soviet Government places the elimination of the nuclear catastrophe above all other interests," he said. "As a non-nuclear country threatened by a nuclear country, the R.S.V. firmly supports the proposal for an international accord protecting all non-nuclear countries as initiated in 1978," Vo Dong Giang continued.

Vo Dong Giang said: "In the tension now prevailing in many parts of continents, the removal of hotbeds of war has become urgent, the S.R.V. supports the establishments of peace and nuclear-free zones in Latin America, Africa, the Middle East, the Mediterranean, Europe, Northern Europe, the Indian Ocean and Southeast Asia. The establishment of such zones must be based on respect for the interests and aspirations of the countries in these regions and must be free of interference and intimidation by outside powers. As an Asian country, Vietnam welcomes and wholeheartedly supports the proposal made by the Peoples Republic of Mongolia for a convention of non-aggression and renunciation of use of war among the Asian and Pacific countries.

"On Southeast Asia, the Lao People's Democratic Republic representing the other two Indochinese countries at the 36th Session of the U.N. General Assembly, advanced a seven-point proposal of peaceful co-existence among countries in the region. This proposal and others made at the various Indochinese ministerial conferences are still standing. Vietnam will spare no effort to join the other Indochinese countries in discussion with the ASEAN countries for peaceful settlement of conflicts and differences between the Indochinese and A.S.E.A.N. countries through negotiations in the spirit that Southeast Asian problems be solved by Southeast Asian countries themselves on the principles of equality, friendship, mutual respect and understanding, consideration of one another's legitimate interests, common consent, non-imposition, non-interference from outside, without the use of force or threat of force in their relations. This will create favourable conditions for setting up a region of peace, stability and co-operation in Southeast Asia.

The Vietnamese foreign minister said Prince Sihanouk would find his presence in the coalition government to be "a bad thing" for himself. "Twice is too many times," Mr Thach said, alluding to the fact Prince Sihanouk lent the Khmer Rouge his prestige by remaining head of state at the beginning of their regime before they stripped him of the title in 1976 and made him into a virtual prisoner in his own palace.

Some observers here believe that Hanoi might even be quite pleased that Prince Sihanouk, who might have retained some popularity in Cambodia, should have openly compromised himself with the Khmer Rouge, execrated by the population for their extreme cruelty while in power.

CSO: 5100/2198

NUCLEAR DEVELOPMENT FOR MILITARY PURPOSES

PY241635 Paris AFP in Spanish 1259 GMT 24 Jun 82

[Text] Buenos Aires, 24 Jun (AFP) -- The navy commander in chief has authorized Vice Adm Carlos Castro Madero to remain in his post as chairman of the National Atomic Energy Commission (CNEA).

Castro Madero and other navy and air force members resigned their positions in the Argentine Government after the crisis which broke out in the military junta when the army made the unilateral decision to designate (Ret) Maj Gen Reynaldo Bignone president.

The resignations were submitted in the wake of the separation of the navy and the air force from the leadership of the military process which started in 1976.

Castro Madero told Radio Continental today that after Great Britain made use of nuclear submarines in the Malvinas war, Argentina is free to make use of its nuclear development for military purposes.

Castro Madero said: The use of nuclear submarines was a violation of the nonproliferation policy agreed upon by the entire world because it turned into a clear disadvantage for Argentina. As I said in Vienna, Argentina will comply with all its obligations, but from now on it reserves for itself the right to undertake the development of the euphemistically so-called nonproscribed military uses. Until today the safeguard agreements signed by Argentina have not permitted it to undertake nuclear energy development for military purposes.

CSO: 5100/2198

BRAZIL

NUCLEAR PROGRAM DROPS TO THIRD PLACE IN PRIORITY SCALE

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 2 Jun 82 p 29

[Text] Brasilia--Energy sector experts yesterday revealed to O ESTADO that the nuclear program has dropped to third place in the scale of priorities, which means a revision of the targets planned by the Geisel administration. They added that is occurring because the Figueiredo administration is convinced that the Brazil-Germany nuclear agreement does not guarantee the transfer of technology to Brazil.

Of the total of 8.585 trillion cruzeiros of investments in the energy sector in the period from 1982 to 1985, 4.621 trillion will be devoted to the generation and transmission of conventional electric energy; 2.589 trillion to the exploration, production and refinement of oil; 776 billion to the nuclear program; 258 billion to the PROALCOHOL program: 116 billion to the production of coal; 50 billion to mining and gasification projects; 66 billion to transportation electrification projects aimed at the replacement of oil derivatives; and 109 billion to various other programs, among them the establishment of energy forests. The figures of those investments are in the same proportion as the degree of priority which the Figueiredo administration wants to give to each sector, the experts said.

They stressed that the doubts regarding the transfer of technology stem from the fact that the nuclear agreement did not guarantee the academic training of Brazilian specialists, instead of the internships which Brazilians are serving in Germany. They are also due, they added, to the fact that the program is being implemented by a German private enterprise, the KWU, which like any private company in the sector is not interested in transferring the nuclear technology of all cycles to avoid having a competitor in the world market.

For all those reasons, they believe that the next administration will revise the Brazilian nuclear program in such a way as to guarantee the transfer of German technology, or to delay it in such a way that there will be time to academically train Brazilian technicians. They observed also that the prediction made by Mario Henrique Simonsen when he left the Planning Ministry in the Figueiredo administration, that "nuclear technology is obtained with investments and intelligence" is being confirmed.

The Investments

The experts explained that the total of 776 billion cruzeiros allocated to the nuclear program until 1985 include the uranium concentrate plant in Pocos de Caldas (Minas Gerais) and the uranium enrichment plant in Resende (Rio de Janeiro). The Resende plant will test the jet-nozzle process on an industrial scale for the first time in the world. Of those funds, 131 billion will be applied this year, 209 billion in 1983, 248 billion in 1984 and 188 billion in 1985.

Of the total of 4.621 trillion cruzeiros allocated to the conventional electric power sector, 570 billion will be applied in the Itaipu hydroelectric plant and 314 billion in the system for transmission of the power to be generated by that plant. The sum of 360 billion cruzeiros was allocated for the Tucurui (Para) hydroelectric plant and 3.377 trillion will be applied in the construction of other hydroelectric plants and transmission systems.

According to the experts, the greatest source for generation of those funds will be the electric energy tariff. For that reason, they explained, the consumer is paying his energy tariff 3 percent above the INPC this year, and beginning in 1983, he will pay 5 percent above the INPC. According to them, these readjustments were the formula that the government found to compensate for the low profitability of the concessionaire companies in recent years.

Of the total of 2.589 trillion cruzeiros of investments in oil, 918 billion are being allocated for exploration, 1.18 trillion for production, 138 billion for refinement, 148 billion for shale, 127 billion for transportation, and 78 billion for other necessary expenditures. Those investments aim at increasing the domestic production of oil and reducing foreign dependence.

8711
CSO: 5100/2191

KWU SPOKESMAN AFFIRMS GUARANTEE OF TECHNOLOGY TRANSFER

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 9 Jun 82 p 28

[Text] The Brazil-Germany nuclear agreement is being considered by Kraftwerk Union (KWU), the company responsible for the construction of the Angra II and III plants, as a model for cooperation with other countries, which impels it to make every effort to guarantee the complete and efficient transfer of nuclear technology to Brazil. That is what the company spokesman, engineer Wolfgang Breyer, told O ESTADO and JT yesterday, replying to the doubts raised by Brazilian energy sector experts regarding the transfer of German technology in the framework of the agreement signed in 1975.

Breyer pointed out that the "successful transfer of German nuclear technology to Brazil serves the interests of KWU itself." He cited three examples of the accomplishments of the Brazilian nuclear program which, in his opinion, confirm the progress and the success of the transfer of technology:

1. The Brazilian Nuclear Corporation (NUCLEBRAS) subsidiary, the NUCLEBRAS Engineering Corporation (NUCLEN), is carrying out more than 50 percent of the engineering in the first two nuclear power stations of the Brazil-German agreement (Angra II and -III), receiving all the necessary documents from KWU, designs, specifications, standards, computer programs; in addition to 100 technicians trained in KWU and other training being implemented or envisaged with the aim of qualifying NUCLEN for all the tasks of the German company.

2. The Heavy Equipment Corporation (NUCLEP) factory has already been operating for 2 years with the same high nuclear quality as the respective factories in Germany.

3. The NUCLEBRAS fuel elements factory located in Resende (Rio de Janeiro) installed with KWU technology is ready to go into operation.

As for statements of energy sector experts that the KWU was not interested in transferring technology to prevent the emergence of Brazil as an international competitor, Breyer said that "KWU will not lose its market through the transfer of technology."

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CSO: 5100/2191

ANGRA-I WILL NOT OPERATE COMMERCIALLY UNTIL 1983

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 10 Jun 82 p 33

[Text] Brasilia--The president of Furnas, Licinio Seabra, said yesterday at the Ministry of Mines and Energy that the Angra-I nuclear plant will not be able to operate commercially at 100 percent of its power of 626 megawatts until the first quarter of 1983. After speaking with Minister Cals, Seabra acknowledged that the plant may be released for safe operation with its load reduced 50 percent by the end of this year.

Until the first quarter of 1983, Angra-I will continue to undergo tests aimed at correcting the problem that arose in the steam generator. He said that the total cost of that plant is around $2,150 per kilowatt hour, which adds up to a total cost of $1.345 billion. He asserted that the Brazilian Government is not incurring additional expense with the repairs that are being made to the plant because those costs are the responsibility of Westinghouse, the company building the plant. Seabra commented good-humoredly on the remarks that have been made about the plant's problems, recalling that there are some in Rio de Janeiro who call Angra-I the "firefly plant" because it "goes on and off." He gave assurance, however, that the plant will operate without any problem at 100 percent power.

According to Seabra, at the moment Angra-I is being tested at 30 percent full power, and it is probable that it will be shut down at the end of next week for cooling for a period of 45 days. After that period, the plant will be tested again at 50 percent power and then will be submitted again to a third phase of tests at 75 percent power, and only in the first quarter of 1983 will it go into commercial operation, that is, will begin to produce electric energy at its full power of 626 megawatts.

Seabra was reluctant to mention dates for the entrance into operation of the plant pointing out that the reporters later would be citing them whereas the interest of Furnas is to conduct tests without haste "since the market is not in pressing need of energy at the moment.

Uranium

Mines and Energy Minister Cesar Cals said in Brasilia yesterday that the project for construction of a uranium enrichment plant in Itataia, in Ceara, is being prepared to enable the country to begin to export that product. Cals pointed out that when the plant goes into operation in 1992, Brazil may export 3,000 tons of uranium concentrate and 500 Separative Work Units (UTS) of enriched uranium per year.

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CSO: 5100/2191

RESENDE FUEL ELEMENTS FACTORY READY TO GO INTO OPERATION

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 15 Jun 82 p 36

[Text] Brasilia--The factory of fuel elements for nuclear reactors, located in Resende (Rio de Janeiro), is ready to go into operation and will be inaugurated immediately after the Football World Cup Matches, as soon as there is an opening in President Joao Figueiredo's agenda. That is what the president of the Brazilian Nuclear Corporation (NUCLEBRAS), Paulo Nogueira Batista, revealed yesterday, explaining that the factory is the third and last stage of the fuel cycle.

However, according to the president of NUCLEBRAS, the second stage of the fuel cycle will not go into operation until 1984 with the inauguration of the uranium enrichment factory, also located in Resende. Until that factory is ready, the uranium concentrate (yellow-cake) produced in Pocos de Caldas (Minas Gerais) will be processed in France, according to Nogueira Batista.

Very affable, which is not his custom with reporters, the president of NUCLEBRAS explained that Brazil already has two of the three stages of the nuclear reactor fuel cycle. The first phase went into operation at the beginning of this year with the uranium concentrate factory in Pocos de Caldas.

The last two stages--uranium enrichment and production of fuel elements--uses German technology transferred by Kraftwerk Union (KWU), the company that is also responsible for construction of the nuclear plants for the construction of the four other plants envisaged in Plan 2000 [as published].

The uranium enrichment factory will test the jet-nozzle process on an industrial scale in Brazil for the first time in the world. The process was tested on a laboratory scale for 10 years in Germany and also in Belo Horizonte. It consists in the artificial increasing of fissionable uranium (Uranium-235) from 0.7 to 3.2 percent.

The function of the fuel factory will be to transform the enriched uranium into uranium dioxide powder and press that powder in the form of fuel pellets. Each fuel element remains in the reactor for 3 years and has the capacity to produce 135 million kilowatt-hours of electric energy.

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CSO: 5100/2191

NUCLEAR WASTE SITE TO BE LOCATED IN ATAORNA

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 3 Jun 82 p 38

[Text] Rio--The storage site for the low- and medium radioactivity waste from the Almirante Alvaro Alberto nuclear power station will be located on Itaorna Beach itself, "in a stone quarry 100 meters from the plants," it was revealed yesterday by Furnas expert, Wanderley Luiz Desorde, during a discussion sponsored by the Brazilian Society for the Advancement of Science (SBPC) between experts from the nuclear sector and ecologists.

Earlier, the government planned to locate the atomic waste storage site in the district of Xerem, municipality of Duque de Caxias, in the state of Rio, but because of the pressure from environmental protection agencies and scientists, represented by the SBPC, it retreated and the designation of the new site was left in abeyance.

In revealing the new site, the Furnas expert explained that the low- and medium ratioactivity waste, solid as well as the liquid and gaseous wastes, will be solidified in cement and packed in steel drums before being stored at the site.

The problem of lack of information dominated the discussions on nuclear energy and the environment sponsored by the SBPC. During his talk in the auditorium of the Microbiology Institute on Fundao Island, the director of the State Environmental Engineering Foundation, Evandro de Britto, declared that questions on the uranium reprocessing plant were taken to Minister Andreazza because the foundation feared that that plant would pollute the waters of the Paraiba River which "is practically the water reservoir of Rio."

An expert from the National Nuclear Energy Commission (CNEN), Claudio Almeida, pointed out that an "opening" is taking place in the nuclear sector thanks to the experts themselves. Otherwise "the technical-scientific personnel of the nuclear program would run the risk of becoming sclerotized in view of so many prohibitions and so many documents stamped 'secret,' 'confidential,' 'restricted,' in addition to other restrictive rubber stamps that made it impossible to have any comment, research, questions and the exchange of information on a wide range of subjects," he said.

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CSO: 5100/2191

BRAZIL

BRIEFS

NUCLEAR FUEL RESEARCH FUNDS--The National Nuclear Energy Commission (CNEN) yesterday received an appropriation of 20.2 million cruzeiros, conveyed through the secretariat general of the Ministry of Mines and Energy, to finance controlled nuclear fusion research at various universities. An agreement to that effect was signed yesterday, in the office of Minister of Mines and Energy Cesar Cals and in his presence, between the secretariat general of the ministry and the CNEN. Researchers who head fusion projects in Campinas and Sao Paulo were also present. The chief of the plasma physics and controlled nuclear fusion group of the University of Campinas (UNICAMP), physicist Paulo Sanaka, declared that within about 10 years the technical feasibility of the construction of a fusion reactor will be confirmed and that within about another 15 years from that date the first prototype of a demonstration reactor will be developed in some country in the world. Commercial reactors will not emerge until around the year 2040. Minister Cesar Cals yesterday also announced the establishment of a national center for plasma physics and controlled thermonuclear fusion to be located in Campo de Roma, in the municipality of Santa Cruz, in Greater Rio. The CNEN will be responsible for administration of that center. [Brasilia CORREIO BRAZILIENSE in Portuguese 10 Jun 82 p 9] 8711

CEARA URANIUM PROCESSING CENTER--Mines and Energy Minister Cesar Cals revealed yesterday that the second half of this year, President Joao Figueiredo will approve his plan to install a large uranium processing center in Itataia, in Ceara, with a view to exporting. The minister said that the plan he explained to the president of the republic provides for the export of 3,000 tons per year of uranium concentrate, the world price of which is $100 per kilogram, and 500 tons per year of enriched uranium, the price of which is $1,780 per kilogram. The minister said that he was fully confident in the successful performance of the technology adopted by Brazil for the enrichment of uranium, namely the continuous jet or jet-nozzle process, and that he is relying on that process for the installation of a large enrichment plant in Ceara with a view to exporting. More than half of the Brazilian uranium reserves known thus far occur in Itataia (137,000 tons). [Brasilia CORREIO BRAZILIENSE in Portuguese 10 Jun 82 p 9] 8711

CSO: 5100/2191

BRIEFS

URANIUM DEPOSITS DISCOVERED--The Peruvian Nuclear Energy Institute has discovered uranium in the Junin Department, in the towns of Huanca and Pando. Therefore, the institute has called for international bids for the exploitation of these deposits. Officials have noted that all work will be carried out at the companies' risk and that under no circumstances the institute will be forced to make any reimbursement if the deposits cannot be profitably exploited. [Text] [PY091701 Lima Radio Union in Spanish 1130 GMT 9 Jun 82 PY]

CSO: 5100/2199

CANCELLATION OF NUCLEAR ACCORD VIEWED AS 'MAJOR VICTORY'

Tehran ETTELA'AT in Persian 2 Jun 82 pp 5, 14

[Text] The issue of the nuclear power plants and the construction of the Bushehr nuclear power plant has once again become "new" in some circles.

International imperialism and the chain of mass media affiliated with it, following the defeat they suffered due to the release of the frozen money resulting from the cancellation of the agreements to build nuclear power plants, pretend that Iran has agreed to build the Bushehr power plant and renew the contract in exchange for the release of its frozen assets.

But these are false notions. To quote the deputy of the Ministry of Energy: On the issue of energy, the decision of the Revolution Council of the government of the Islamic Republic concerning the cancellation of the agreements to build nuclear power plants is still valid and the trickery of the imperialist cartels and trusts will get nowhere in this area, because the revolutionary government and the people of the Islamic Republic of Iran, who have the interests of the Muslim nation at heart in every area, will not accept such enslaving agreements.

The reporters of ETTELA'AT, given the importance of this issue and in order to clarify the ambiguities which exist in this regard, held a series of interviews with Dr Fereydun Sahabi, deputy for energy of the Ministry, and Dr Reza Amrollahi, head of the atomic energy organization of the Islamic Republic of Iran, which you will read in two issues. The first part of this report follows for our dear readers:

Western imperialism, in the guise of companies, agencies, and various atomic concerns, has conspired, through trickery and deception and with the cooperation of their puppet, the treacherous shah, to make Iran a nulear power. Of course, the plan to make Iran a nuclear power was not in the best interests of the development and progress of Iran, but for its plunder, more than ever before.

The magic tricks which have been done in Iran over 20 years by the imperalist witch at the expense of the oppressed Iranian nation, during these dark years as well as at the height of the Islamic revolution, and the neutralization of the 20 years of Western conspiracies in the 2 years of the Islamic revolution of Iran, is another story which should be told at another opportunity.

Among the latest deceits of the Western plunderers was the plan to make Iran a nuclear power, the plan to build a 1,200 megawatt nuclear power plant in Bushehr. After the victory of the revolution of the Muslim nation of Iran, this plan was exposed and with the cancellation of the agreement to build a nuclear power plant in Bushehr, this conspiracy was also neutralized.

Following the cancellation of these agreements, the chain of imperialist companies, with the help of their dependent countries, blocked some of the property and assets of the combative, revolutionary nation of Iran with such excuses as compensation, intending to devour these assets. However, with the persistent efforts of the government of the Islamic Republic of Iran, significant sums of these assets were retrieved from the imperialist plunderers and returned to the government treasury.

The victories which the combative Muslim nation of Iran enjoyed in this way caused certain rumors, such as compromising with the foreign contractors to build this power plant. In order to clarify these ambiguities and declare that any compromise in this regard is untrue, noting that the people and the government of Iran will never accept the thesis of "atoms for peace" from a belligerent country such as the United States, we held an interview with Dr Fereydun Sahabi, the deputy for energy of the Ministry of Energy, and Reza Amrollahi, the director of the atomic energy organization of Iran, who clarified all the facts and declared all the rumors to be false.

The Government Policy and Nuclear Energy

Dr Fereydun Sahabi pointed out the wrong, incoherent policy of the previous regime in regards to energy, explaining the necessity for order and coherence in the government policy after the revolution in this regard, and said: "After the revolution, it was felt that we urgently needed to act on the basis of a coherent program which would be worthy of the Islamic Republic and the Islamic revolution of Iran, by creating coordination among the responsible organizations of energy. Hence, after much effort, the economic council approved the establishment of an 'energy council.' On the basis of the existing standards and regulations, in regards to every issue concerning any kind of new energy, an authority must decide and offer a coherent plan. That authority is the 'energy council.' In regards to nuclear energy, too, the energy council will make decisions. After a great deal of study of energy production and the possibility of producing conventional energy and its abundance in Iran, if the new source of energy is found by the energy council to be economically more feasible and necessary, Iran will decide to produce it and the related organizations will begin to work . . . ."

Concerning the Bushehr nuclear power plant and the cancellation of the agreement, Dr Sahabi said:

"Concerning nuclear energy, especially in connection with the Bushehr nuclear power plants, after the revolution, a great deal of study and examination was done. Contrary to what is heard, that 'the closure of Bushehr nuclear power plants' was an immature, unilateral decision, I believe that this decision was correct and quite logical. The issue was raised in the circles of the experts of the country and most of the university professors and experts examined the issue (in regards to whether or not having nuclear power plants is appropriate to the conditions of Iran today). The conclusion of these studies was in the negative. That is, having the Bushehr nuclear power plants, which would be very costly, was not considered to be beneficial and in the best interests of the country. At least, it did not seem necessary to start until some time in the future.

"When this decision was made, the energy council was not active but the expert organizations, as the technical arm and group of experts, studied the issue. The Revolution Council and the Cabinet of the time, which were at that time the most logical and legal decision-making organizations, approved this decision.

"At present, the decision of the Revolution Council and the Cabinet of the time in regards to the Bushehr power plants is still valid.

"If it is felt that it is urgently vital that the issue be studied again, it must be referred to the energy council. The technical branch of the energy council will, after study, announce the results to the energy council so that the energy council can make a decision in this regard. The issue of nuclear power plants is different from that of other power plants in that it also has a political dimension. Therefore, if we want to have nuclear energy for political reasons, we must realize that merely our having it will not make us rich, since we do not have the technology for creating nuclear energy, and consequently we will be faced with industrial dependence, dependence in production, fuel supplies, and upkeep, as well as political and economic dependence, and, most importantly, dependence in the area of security for the power plants in connection with environmental protection."

How to Enter Nuclear Technology

In this interview, Dr Fereydun Sahabi explained the logical methods to enter nuclear technology and said: "Nowhere in the world have steps been taken to purchase a 120 [as published] megawatt power plant without taking into consideration the abovementioned issues. In building up this industry, they started with very small experimental and research reactors, with power plants with a 5, 10, or a maximum of a 30 megawatt capacity, which can be controlled, are useful, and are educational to build. Hence, it is also better for us, before getting involved with giants of 1,200 megawatts of power, to first begin by learning this technology through educational and research programs and the like which can be controlled.

"May God bless martyr 'Abbaspur. Last year in a seminar on building nuclear reactors, which was held in Esfahan through the efforts of the nuclear energy organization, he made the point that we should start with small power plants and insisted on it. Martyr 'Abbaspur insisted that we should not return to the dependencies of the previous regime."

Insistence of Martyr 'Abbaspur on Cancellation of Agreements

About the role of martyr 'Abbaspur and his decisive position in regards to the cancellation of the agreement for the Bushehr nuclear power plants, Dr Fereydun Sahabi said: "Martyr 'Abbaspur continually emphasized the cancellation of the agreement for the Bushehr nuclear power plants. In a seminar examining dependencies, the provision of electrical energy, and the difficulties of the transmitter lines of the Bushehr power plants, martyr 'Abbaspur was one who actively participated in the various committees. Before he took over his post in the Ministry of Energy, he participated in related committees as an expert, along with his colleagues from the Industrial University. During the administration of martyr 'Abbaspur in the Ministry of Energy, he made a clear, sound decision based on his total attention to the various dimensions of the issue, especially the dependency aspects regarding the power plants, the difficulties in regards to the transmitter line, the location of the power plant outside the place where the electricity is used, the upkeep problems, the possible future technical problems. and the problems that it would cause concerning the transmitter line and the national network. Rightly, martyr 'Abbaspur called the cancellation of the Bushehr nuclear power plants a victory and an important gain for the revolution."

The Defeat of Cartels

Dr Fereydun Sahabi, the deputy for energy of the Ministry of Energy, said concerning the international repercussions caused by the cancellation of the agreement for the Bushehr nuclear power plants: "Large Western countries and large international cartels expected much profit from the contracts and programs to build 23 nuclear power plants in Iran. The cancellation of these plans and the disruption of the contract to build the Bushehr power plants disrupted their sweet dreams. Since that time, significant stagnation seems to have marked the nuclear fuel industry and its market throughout the world. One of the manifestations of this stagnation is the unprecedented drop in the price of "uranium" and the tremendous decrease in orders for nuclear power plants. The contractor for the Bushehr power plants has not received another order since the cancellation of this agreement. This is the greatest defeat for the international cartels and the capitalist world, who have had their greedy eyes on countries such as Iran, because since that date, other developing countries have become more alert and aware in signing such agreements. Hence, the cancellation of the agreement for these nuclear power plants in Iran had a worldwide effect which can only be considered a positive and constructive effect of the Islamic revolution of Iran especially on the Third World.

Answer to Slander

Unquestionably, the enemy writhes because of this defeat and will not stop at any trick to gain its illegitimate interests. After the cancellation of the nuclear accords for Bushehr and other parts of Iran, the contractors and companies involved in the agreements took a hostile position against Iran and the Islamic Republic of Iran, which included the freezing of some of Iran's assets in France. After much effort and strong reasoning in the courts of France, the Islamic Republic of Iran successfully freed some of its money from the blockage in two cases, the most recent of which was a sum of $1 billion. Defeated Western capitalism tries to pretend through its servants that Iran has agreed to the construction of the Bushehr power plant in exchange for its freed assets. The answer of the deputy for energy of the Ministry of Energy neutralizes this slanderous and unjust rumor.

Dr Sahabi said in this connection: "The freeing of $1 billion in Iranian assets has no connection with the issue of the Bushehr power plants. The sum in question was a loan that the government of Iran had previously given to the atomic energy commission of France.

The above-mentioned company acted to freeze the Iranian loan and because of the situation in the French government and its extremely reactionary position against Iran and the Islamic revolution of Iran, this loan was frozen. In fact, it can be said that the government of Iran had extended this loan to the French government itself, because the French atomic energy commission is a government organization and the French government had guaranteed this loan. The Paris court first endorsed this blockage, but the second time the issue was raised, the French commerce and appeals court recognized the guarantee of the French government. This is a great defeat for the (Avardif) company and the French atomic energy commission. Now, the French government is responsible for repaying the loan with interest, if, of course, the recipiant of the loan declines to pay it. This is also a victory for the revolution and the Islamic Republic of Iran.

The related institutions and organizations will take the necessary legal and judicial steps to "update" the loan and its interests or its return or activate the loan and have the recipiant pay the interests.

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NEW CORPORATION TO CONTROL NUCLEAR ACTIVITIES

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[Text] As of 1 July, all state-financed nuclear activities in South Africa are to fall under one body, to be known as the Atomic Energy Corporation of South Africa. The announcement was made in Pretoria by the minister of mineral and energy affairs, Mr F.W. de Klerk.

The Atomic Energy Corporation is being created under the Nuclear Energy Act. Mr de Klerk said the corporation's board of directors will consist of the current president of the Atomic Energy Board, Dr J.W.L. de Villiers, who will serve as the first full-time executive chairman, and eight other members.

They are the director-general of mineral and energy affairs, Mr S.J.P. Du Plessis; the chairman of the Nuclear Fuel Corporation and former president of the Chamber of Mines, Mr D.A. (Etheridge); the chairman of the Phalaborwa mining group, Mr J.A. MacMillan; the chairman of the Electricity Supply Commission, Mr J.H. Smith; the managing director of the South African Coal-Oil and Gas Corporation, Mr J.A. Stegman; the chairman of the telephone manufacturers of South Africa, Dr N. Stutterheim; South Africa's former ambassador in Washington, Dr Donald Sole; and the director-general of foreign affairs and information, Mr Hans van (Dalsen).

Mr de Klerk said that with the establishment of the new corporation, the Uranium Enrichment Corporation [UCOR] and the Atomic Energy Board will be reestablished as full subsidiary companies of the Atomic Energy Corporation. The current managing director of UCOR, Dr W.L. Grant, will retain his position when UCOR becomes a subsidiary. The current vice president of the Atomic Energy Board, Dr J.P. Hugo, will be appointed managing director of the Nuclear Development Corporation, which is what the board will be called once it becomes a subsidiary. Mr de Klerk paid tribute to Dr Ampie Roux, chairman of UCOR, and the father of the country's nuclear and energy research development program, who recently announced his retirement.

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NORMANDY ENLARGES ROLE AS NUCLEAR REGION; PLANTS DESCRIBED

Paris L'USINE NOUVELLE in French 20 May 82 p 69

[Article: "The Nuclear Boom"]

[Text] While its neighbor Brittany has turned its back on nuclear energy, Normandy has resolutely committed itself to it. Three nuclear power plants of the 1300-MW generation are now under construction there: two in Upper Normandy--Paluel and Penly; and one in Lower Normandy--Flamanville. There is also the reprocessing plant at La Hague, located like Flamanville in the Nord-Cotentin department. This plant is now being enlarged.

Normandy is now on the way to becoming the second nuclear region of France, and at the same time it will begin to export electricity instead of having to import it from other regions. But before reaching that point, it will have spent a long time on construction at its nuclear plant sites: 13 years will separate the start of work at the Paluel site in the spring of 1976 from the completion of Penly in early 1989.

What is the status of the work at these huge construction sites now? At Paluel, the first unit is now being tested. Units II and III are in the electromechanical assembly phase, and unit IV is having concrete poured. In theory, everything will be completed by the end of 1985. At Penly, where one unit has been decided on for the time being, the earth-preparation work is now being completed. The first concrete pouring is scheduled for August. Flamanville I is just beginning its electromechanical work, and Flamanville II is in the "unit" civil engineering phase (date for start of service: 1985).

The cost for EDF [French Electric Power Company] of building these three plants will be (in current value) 35 billion francs (seven units estimated at 5 billion per unit). To this figure should be added several hundred million francs for developing equipment, some of which is paid for by EDF, with the balance (for equipment such as schools, housing, etc.) being paid by the local communities.

What are the direct spinoffs of this vast program for regional industries ? As of 1 January, Paluel and Penly had provided 2 billion francs worth of work for companies in Upper Normandy; by the same date, in Lower Normandy, the work done by local firms for the construction of Flamanville amounted to close to 1 billion francs. In addition to direct contracts from EDF, these figures include subcontracts and work on related facilities (see the following table). Could more money have been earned by local firms, since in any event, contracts that are considered to be "grouped" (such as the nuclear boiler and turbo-alternator, which make up 57 percent of the cost of a plant) are not accessible to businesses in the region? That is hard to say. In Normandy, as elsewhere, the participation of local companies depends on the attitude of EDF and the major national groups working on the site, but it also depends on the capability and determination of the region to get itself organized. In Upper Normandy, after some problems at the time the Paluel construction site was started, the creation of a "nuclear energy information cell" at the initiative of the CRCI [Regional Chamber of Commerce and Industry] helped to turn the situation around. The industrial possibilities of the region were inventoried, businesses were informed about the content of bids being prepared, EDF was given a list of local businesses which could be consulted, etc. This cell plays the essential role of a conveyer belt between local firms and EDF's Clamart equipment region which is in charge of the Paluel, Penly, and Flamanville construction.

"EDF did play its game," says Jacques Hoppe, who fills a similar function at the CEBANOR [Committee for the Economic Expansion of Lower Normandy]. But in his view, Flamanville is finished, or almost: "Most of the direct contracts have already been awarded. Only subcontracting work, especially some at the site, still holds out some possibilities of interest." The one opportunity left for the Cotentin and Lower Normandy area is that La Hague is there to take over now.

Based on the economic conditions of July 1981, the expansion of this reprocessing plant requires an investment of 23.5 billion francs, to which have to be added 1 billion for development of the region (roads, community facilities, etc.). That is over twice the cost of Flamanville!

3 Billion Francs for Local Industries
(Amount of contracts awarded as of 1 January 1982: in billions of francs, current value)

	Upper Normandy		Lower Normandy
	Paluel	Penly	Flamanville
Direct contracts for construction work (including civil engineering and public works)	571.8 (420.8)	80.3 (52)	389.4 (277.4)
Housing (equipment and operation)	206.7	22.1	76.6
Specific equipment for large power plant sites	68.8	14.9	27.3
Subcontracting and supplies	492.5	216.2	192.1
Loan contracted with the CNE [expansion unknown] for anticipated equipment	134	25.5	85.4
Estimated amount of commitments made independently of EDF (HLM [Low Cost Housing] units, etc.)	116.2	56.3	209.2
Total	1,590	415.3	980

According to the COGEMA [Nuclear Materials General Company] planning, local and regional industries (building, mechanics, boiler construction, services) should be able to provide about 2 billion francs worth of work to this program. In any event, at the site the "mobilization" has already taken place. A technical-economic division has been established as part of the CEBANOR, which acts as a sort of middleman between the SGN [expansion unknown], a COGEMA subsidiary, which is prime contractor for the project, and the local industries. Furthermore, two public works groups have been established. In addition, some slag industries (Goavec in Alencon, Maisonneuve in Cerences, and Simon Freres in Cherbourg--which already is working as a

COGEMA subcontractor), based on their experience in using stainless steel, have joined in the competition for this work.

The vast site at La Hague has barely gotten off to a start. It will last until 1989 and during its peak in 1984, it will employ 4,000 people, of whom 1,500 to 2,000 will be local workers.

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